

R E M A R K S

The two independent claims (1 and 33), in their recitals of "the uppermost recrystallization linear velocity V at the time when a focused semiconductor beam DC irradiates said groove portions or land portions," have been further amended to specify "the focused semiconductor beam being used for recording or reproducing," and thereby to clarify their definitions of certain novel and distinguishing features of the invention. The added recitals are supported by the disclosure in the original specification, e.g., at page 56, lines 7-13 (Example 1), and at p. 59, lines 15-21 (Example 2). Since this Amendment does not increase either the total number of claims or the number of independent claims, no additional fee is necessary.

Claims 1 (independent; amended), 2 - 4, 6 - 10, 12 - 14, 17 - 25, 27 - 32 (directly or indirectly dependent on 1), 33 (independent; amended) and 34 - 38 (dependent on 33), all directed to an optical information recording medium, are in the application. No claim has been allowed.

In the aforementioned Office Action, claims 1 and 33, and other claims, have been finally rejected under 35 U.S.C. §103(a) as unpatentable over each of the following combinations of references:

- (1) Yoshinari et al. '913 in view of Ando et al. '543 and Hisotomi et al. WO 99/38168;
- (2) Yasuda et al. '788 in view of Ando et al. and Hisotomi et al.;
- (3) Uno et al. '135 in view of Ando et al. and Hisotomi et al.;
- (4) Yasuda et al. or Uno et al. in view of Ando et al. and Hisotomi et al., further in view of Nobukuni et al. EP 1056077.

Each of these grounds of rejection, as understood, relies on the applied primary reference (Yoshinari et al., Yasuda et al. or Uno et al.) as disclosing media that "would inherently have uppermost recrystallization velocities in the 12-24 m/s range for at least some specific conditions of laser power and wavelength," while relying on the secondary references only for other features such as lead-in areas containing embossed information (Ando et al. and Hisotomi et al.) or recording medium compositions, substrate thicknesses, and/or track widths and depths (Nobukuni et al.).

In response, applicants respectfully submit that the cited primary references neither disclose nor suggest the definition of the range of recrystallization linear velocity between 12 and 24 m/s as set forth in each of present independent claims 1 and 33. Specifically, applicants remark as follows:

Yoshinari et al. '913 only discloses that when linear velocity of more than 6.8 m/s is adapted for recording, the transmitting rate can be much highly set. In examples 4 and 5 in Yoshinari et al., only the linear velocity of 8.2 m/s is disclosed for recording onto the media, but Yoshinari et al. does not disclose at all what the recrystallization linear velocity is.

Generally speaking, the optimum recording velocity and the recrystallization linear velocity are nearly the same. But in Yoshinari et al., it is proposed that the cooling pulse is controlled to be lower in order to record at high velocity. This means if the medium is not gradually cooled, amorphous material tends to appear much at such recording velocities as 8.2 m/s in examples 1-5.

Therefore, the recrystallization linear velocity in Yoshinari et al. can be thought to be lower than 8.2 m/s, which tends easily to make the medium amorphous.

Yasuda et al. '788 only discloses the recording linear velocity of 10 m/s, and never discloses at all what the recrystallization linear velocity is.

Further, Yasuda et al. discloses that by providing a layer for accelerating crystallization, the recording linear velocity is improved from 4 m/s to such a high velocity as 10 m/s, which can be thought that the recrystallization linear velocity is near to utmost 8 to 9 m/s, based on the recordable recrystallization linear speed of 10 m/s. Therefore, this means that Yasuda et al. is unable to reach 12 m/s.

Uno et al. '135 discloses only the recording linear velocity of 12 m/s, without describing at all about the recrystallization linear velocity. Further, Uno et al. also provides a layer for accelerating crystallization like Yasuda et al. in order to make the recording linear velocity higher, so that the recrystallization linear velocity can be thought to be 12 m/s at most, or the recordable maximum speed can be thought to be at most 10 to 11 m/s.

Moreover, as shown in Table 1-3, when it is recordable at recording linear velocity of 12 m/s, it is also recordable at recording linear velocity of 6 m/s. Therefore, the recrystallization linear velocity is thought to be between 6 and 12 m/s in Uno et al.

Based on what is mentioned above, the definition of the recrystallization linear velocity between 12 and 24 m/s in claim 1 is believed to present a patentable distinction over the cited references.

Further, in response to the Examiner's observation that "the claims fail to specify the conditions for the determination of the uppermost recrystallization velocity," applicants have added to the definition, in the independent claims, of "the uppermost recrystal-

lization linear velocity V at the time when a focused semiconductor beam DC irradiates said groove portions or land portions," the recital "the focused semiconductor beam being used for recording or reproducing."

These amendments are supported in Examples 1 and 2 of applicants' specification. In Example 1, a CD, which is a light recording medium, is projected with laser light of 780 nm for recording and reproducing, when the linear recrystallization velocity is measured. Also, in Example 2, a DVD is projected with laser light of 660 nm for recording and reproducing, when the linear recrystallization velocity is measured.

It is therefore submitted that the recitals defining the uppermost recrystallization linear velocity V in independent claims 1 and 33, as herein amended, in combination with the other features recited in those claims, distinguish all the claims patentably over Yoshinari et al., Yasuda et al., Uno et al., and any proper combinations thereof with Ando et al., Hisotomi et al. and/or Nobukuni et al.

Concerning the statement in the Office Action at page 3, lines 10-13, although applicants' specification sets forth that "Information that the maximum recording linear velocity is 8.44 m/s the speed of the CD was recorded onto the substrate 1" at p. 58, lines 9-11, in applicants' specification, it is also described that "it is possible to record at a DVD four-time fast speed" at p. 59, lines 24-25, in the specification. Therefore, it is respectfully submitted that the above-cited statement in the Office Action is merely based on a misunderstanding.

For the foregoing reasons, it is believed that this Amendment will place the application in condition for immediate allowance.

Entry of the Amendment, and favorable action, are accordingly
courteously requested.

Respectfully,

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